Application No.: 10/567,964 Attorney Docket No.: 4252-0118PUS1
Reply to Office Action dated April 9, 2008 Art Unit: 1796

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A ring-opened polymer hydrogenated product

containing a repeating unit originating from a polycyclic norbornene monomer with three

or more rings in the polymer repeating units, having a weight average molecular weight

of [[500]] 25,000 to 1,000,000, and having a racemo diad proportion of 51% or more.

2. (Original) The ring-opened polymer hydrogenated product according to claim

1, wherein the racemo diad proportion is 70% or more.

3. (Original) The ring-opened polymer hydrogenated product according to claim

1, wherein the content of the repeating unit originating from a polycyclic norbornene

monomer with three or more rings is 50 mol% or more.

4. (Original) The ring-opened polymer hydrogenated product according to claim

1, wherein the repeating unit originating from a polycyclic norbornene monomer with

three or more rings is a repeating unit originating from dicyclopentadiene.

5. (Original) The ring-opened polymer hydrogenated product according to claim

1, which is a crystalline polymer.

6. (Original) The ring-opened polymer hydrogenated product according to claim

5, which is a polymer having a melting point of 150°C or more.

7. (Original) A process for producing the ring-opened polymer hydrogenated

product according to claim 1, comprising a step of polymerizing a polycyclic norbornene

monomer having three or more rings by solution polymerization using a group 6

transition metal compound with a hydroxyl group-containing aryloxy group or a hydroxyl

group-containing alkoxyl group bonded thereto as a polymerization catalyst to obtain a

ring-opened polymer and a step of hydrogenating double bonds in the main chain of the

ring-opened polymer.

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8. (Original) The process according to claim 7, wherein the group 6 transition metal compound with a hydroxyl group-containing aryloxy group or a hydroxyl group-containing alkoxyl group bonded thereto is a compound shown by the following formula (a),

$$M(NR^a)X_3Y \cdot L_b \tag{a}$$

wherein M is a transition metal of group 6 of the periodic table, R^a is a substituted or unsubstituted phenyl group with a substituent at any of 3, 4, or 5 position or a group represented by $-CH_2R^d$, wherein R^d indicates a hydrogen atom, a substituted or unsubstituted alkyl group, or a substituted or unsubstituted aryl group, X represents a halogen atom, alkyl group, aryl group, or alkylsilyl group, Y is a hydroxyl group-containing aryloxy group or a hydroxyl group-containing alkoxyl group, L is an electron donating neutral ligand, and b is an integer of 0 to 2.

9. (Original) A process for producing the ring-opened polymer hydrogenated product according to claim 1, comprising a step of polymerizing a polycyclic norbornene monomer having three or more rings by solution polymerization using a group 6 transition metal compound shown by the following formula (b) as a polymerization catalyst to obtain a ring-opened polymer and a step of hydrogenating double bonds in the main chain of the ring-opened polymer,

$$M(NR^b)X_{4\text{-}a}(OR^c)_a\cdot L_b \tag{b}$$

wherein M is a transition metal of group 6 of the periodic table, R^b is a substituted or unsubstituted phenyl group with a substituent at any of 3, 4, or 5 position or a group represented by $-CH_2R^d$, wherein R^d indicates a hydrogen atom, a substituted or unsubstituted alkyl group, or a substituted or unsubstituted aryl group, X represents a halogen atom, alkyl group, aryl group, or alkylsilyl group, R^c is a substituted or unsubstituted alkyl group or a substituted or unsubstituted aryl group, L is an electron donating neutral ligand, a is 0 or 1, and b is an integer of 0 to 2.